

Massachusetts Institute of Technology
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LUMINARY Memo #199

To: Distribution
From: Dave Moore
Date: 12 February 1971
Subject: P99 - Erasable Memory Program for a Guided RCS Burn -
Luminary 1E

Summary

As it may or may not be known, the LM Deorbit burn for Apollo 14 was performed using P99 - Erasable Memory Program - written for Luminary 1D (Rev 178) and enumerated in Luminary Memo #168. Herein lies the re-write of P99 for Luminary 1E (Rev 209).

Description

The program is the same as enumerated in Luminary Memo #168 except that five (5) locations have been changed from Luminary 1D to Luminary 1E.

The erasable program follows on the next pages. For questions concerning initialization of parameters, it is suggested that the reader consult Luminary Memo #168.

NAME	ECADR	OCTAL	SYMBOLIC
P99WHICH	3404	01450	VN 0640
	3405	12324	TCF WANTAPS
P99IGN	3406	05520	TC DOWNFLAG
	3407	00161	ADRES IDLEFLAG
	3410	05263	TC TASKOVER
	3411	12150	TCF P40SPOT
	3412	05656	DEC 2990
	3413	03667	ADRES STEERING
	3414	74066	BBCON STEERING
	3415	12404	TCF COMMON
	3416	12433	TCF IGNITION
	3417	01406	TC P99IGN
P99	3420	05313	TC NEWMODEX
	3421	00143	DEC 99
	3422	06060	TC INTPRET
	3423	77634	RTB
	3424	10636	E/CALL
	3425	56246	CADR S40.1
	3426	77650	GOTO
	3427	75202	P40IN +3
F	3734	00026	2DEC 0.17792 B-7
	3735	30605	(400 lb - 4 jets)
MDOT	3736	00151	2DEC 0.05135 B-3
	3737	05214	(APS MDOT)
TDECAY	3740	00000	2DEC 0
	3741	00000	
VEX	3742	15400	2DEC 27 B-6
	3743	00000	(27.00 M/CS)
WHICH	3455	01404	ADRES P99WHICH
DVTHRUSH	1250	00000	OCT 0
DVCNTR	3515	00004	DEC 4
N26/PRI	2371	13001	OCT 13001
N26/2CAD	2372	01420	ADRES P99
	2373	12067	BBCON P99

End of Erasable Program - P99

To begin the program key V30E via DSKY.

The sequence, then is:

V30E
P99 shows in mode lights
V50N18 flashes
Pro for trim; E for no trim
V06N40 to TIG counting down
V06N40 after TIG counting to cutoff
V16N40 cutoff
V16N85 VG residuals

Appendix - Uplink for P99

<u>Load 1</u>	<u>Load 2</u>	<u>Load 3</u>
V71E	V71E	V72E
24E	12E	21E
3404E	3734E	3426E
1450E	26E	77650E
12324E	30605E	3427E
5520E	151E	75202E
161E	5214E	3455E
5263E	0E	1404E
12150E	0E	1250E
5656E	15400E	0E
3667E	0E	3515E
74066E	V33E	4E
12404E		2371E
12433E		13001E
1406E		2372E
5313E		1420E
143E		2373E
6060E		12067E
77634E		V33E
10636E		
56246E		
V33E		